

NOTES ON SOME ROCK WALLABIES, GENUS *PETROGALE*, WITH
DESCRIPTIONS OF TWO NEW SPECIES.

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The Rock Wallabies form a well defined group, inhabiting rocky terrain all over Australia, but they do not extend into Tasmania or New Guinea.

The members of this genus, being specially adapted to live in rough rocky country, and on precipitous hill-sides, are perhaps the most agile of all the marsupials. On flat ground, they proceed by a series of short hops, quite a different gait from that of the ordinary wallabies, but, once among the rocks, they show surprising agility, and can travel at a great pace among boulders, which would baffle any other marsupial. For all their agility, however, they fall victims to very sluggish enemies, in the form of carpet snakes, which almost invariably inhabit the same class of country. Like most of the Kangaroo tribe, they have special tracks leading to and from their feeding-grounds, and it appears that the fox knows all about this habit, for the Brush-tailed Rock Wallaby has become very scarce within Reynard's range during the past few years. Skins of this species used to come into the sale rooms in bales, now it is rare to see one.

The legs of the Rock Wallabies are shorter and more robust, and the forelimbs proportionately stronger, than those of the members of the genus *Macropus*. Their tails, too, are long and flexible, and do not form a support to the body as they do in the kangaroos. They thus, in some respects, form a connecting link between the terrestrial Wallabies and the Tree Kangaroos.

This genus naturally falls into three groups. In the south-east we have *Petrogale penicillata*, which, as in many others of our animals, gets lighter in colour towards the north. In Victoria, this species is blackish-grey, but the New South Wales specimens are lighter and brownish-grey, especially in the more open country. In Queensland, we find the closely allied *P. assimilis* and *P. godmani*, which are smaller and less conspicuously marked. In the far north they are replaced by the plain, sandy-grey *P. inornata*.

The second group is represented by the handsome *P. xanthopus* of Flinders Range, South Australia. This group was only known from a rather restricted range, but through the kindness and interest of Mr. M. Hammond and Mr. Frank Tully, I have lately received a second species from south-west Queensland. So far as is known this new species inhabits the ranges in the vicinity of the Bulloo River. The skins received came from Terachy Station, near Adavale. In writing of these animals, Mr. Tully states, "The wallaby out here seldom leaves the ranges, and I know for a fact that it can live without water in the driest summers. When there is no grass it lives on the shrubs and bushes. It can go up the face of a cliff, which is almost perpendicular."

In Central and Western Australia we have the Grey Rock Wallabies, represented by *P. lateralis*, and two very closely allied species found on Mondrain and Pearson Islands in the Australian Bight. *P. brachyotis* is found in the north-west.

In 1904 a Rock Wallaby was described by Thomas (Nov. Zool., xi., p. 366) as *P. rothschildi* from the Cossack River, near Roebourne, North-west Australia. This is a rather plain coloured animal with practically no markings, but it has two peculiarities, the hair on the nape being reversed and purplish in colour. This last is described by Thomas as brown, but my brother, who has observed

and collected this species near Roehourne, states that the colour of the nape is purple in the live animal, so I assume it had faded to brown in the holotype. As this species was described from a skin only, its relationship cannot be satisfactorily determined until a skull is available.

Through the kind offices of Mr. Wilson B. Sinclair, of Ardmore Station, Dajarra, North-west Queensland, I have lately received a skin and skull of another very distinct species of Rock Wallaby, though two of its characters approach those of *P. rothschildi*—the hair on the hack of the neck is inclined to be reversed, and the colour of the base of the hair on that part is pinkish purple or puce. The hack is grey, irregularly mottled with blackish and tawny-brown, while the lateral and occipital markings are indistinct. It is interesting to note that this eastern species is found in about the same latitude as the western *P. rothschildi*, and only *P. lateralis* has been recorded from the intermediate central districts (Horn. Exped. Zool., p. 15). The skull characters of the new species are rather similar to those of *P. penicillata*.

Mr. Sinclair, who is much interested in the native animals, gives the following splendid account of the habits and habitat of this new wallahy. "Rock Wallahies are fairly numerous here, though I gather from men who have been in the locality for the past ten years, that they seem to be decreasing in numbers. I reside just on the edge of the vast open downs, which stretch for hundreds of miles, extending westward into the Territory. To the east is very rough and mountainous country. Here is a great granite intrusion that reaches almost to the edge of the downs, and huge granite boulders are strewn about the surface of the ground everywhere. At intervals, are little round hills, averaging 150 feet above the surrounding level, and appearing as heaps of huge granite boulders which someone had gathered and thrown together. These are the homes of the Rock Wallabies. In the early morning and late in the evening they can be seen sitting about on the rocks everywhere, and climbing about on the little hills. Old skeletons are noticeable in the small caves, crevices, and other places under the rocks. When one takes the trouble to explore these hills and sees the natural protection they afford the wallahies, one naturally comes to the conclusion that the animals should increase in numbers, but I think the number dying from natural causes, together with those killed by the Wedge-tail Eagle and occasionally by Dingoes, about balance the scale of life. The Eagles are, I think, their worst enemies. I often see them sitting on the rocks when riding by."

The types of the two species described in the following pages are in the Australian Museum, and I wish to thank the Director of that Institution for permission to examine specimens in the collection under his charge, and Mr. E. Le G. Troughton for reviewing the material and the descriptions.

Petrogale celeris, sp. nov.

Related to *xanthopus* but smaller. General colour of hack, varying shades of grizzled greyish-brown (about wood brown, of Ridgway, tinged with grey), the grey predominating on the nape and between the shoulders; the brown is darker down the centre of the hack. A well defined blackish-brown streak runs from the crown, down the upper hack, becoming ill defined on the rump, but showing distinctly through the reddish cinnamon patch on the tail-base, thence continuing along the tail to its tip. Forepart of shoulders, and front and inner side of arm to wrist pinkish cinnamon; forepart of thigh, and over knee to ankle, cinnamon. Hindpart of shoulders and forearm, and inner part of upper thigh, hister. A narrow huffy-white lateral streak runs from wither to hip, and is separated by a dark line from the huffy-white under surface. There is a conspicuous patch of reddish cinnamon at the base of the tail, which is more prominent than a somewhat similar patch in *xanthopus*. Face, varying shades of

grey, suffused with tinges of cinnamon; a well defined whitish cheek stripe present. Back of ear uniform sayal brown; inner sides edged with white for basal half (tips missing on skins). A light spot above the eye, but of sayal brown rather than the "rich orange" spot of *xanthopus*. Forepaws blackish-brown. Hind-foot, light tawny-olive, becoming dark brown on the toes, with black hairs covering the tip of the longest toe. The tail is shorter haired than that of *xanthopus*; in the female the dark brown line along the tail is widened into blotches at regular intervals, which are faintly extended laterally, thus producing an effect of ill defined annulations of blackish-brown, alternating with light greyish buffy-brown. In the male the dark tail stripe is very ill defined, and correspondingly the blotches are but faintly indicated; the annulations are barely discernible, except for a few inches at the tail-tip.

The type skull is that of a female, which is not quite adult; there are no notable features distinguishing it from the skull of *xanthopus*, the shape of the nasals and size of the teeth conforming to those of the latter species.

Dimensions of type, flat skin:—Head and body, 600; tail, 565; hind-foot, 158 mm.

Skull:—Basal length, 88; greatest breadth, 52; nasals:—length 38, greatest width 14, least width 7; constriction breadth, 17; palate length, 54; breadth outside m^2 26; diastema, 20; i^3 5 mm.

Hab.—Ranges in the vicinity of the Bulloo River, South-west Queensland. Type from Terachy Station, near Adavale.

Type.—Nearly adult female, Australian Museum collection, M.3219. A flat skin of a male, M.3220 also examined. Both specimens were donated by myself.

Comparison with Ally.—By its general colouration *celeris* is clearly related to *xanthopus* of South Australia. The general colour of the back is not so uniform as in *xanthopus*, but as the white markings of *celeris* are washed with buff, the actual markings are not glaringly contrasted as in *xanthopus*. The striking white hip patch of *xanthopus* is absent in *celeris*, the lateral stripe of the latter being buffy-white and only about half as broad as in *xanthopus*, therefore it does not present the striking contrast made by the broad, clear white lateral stripe of the latter.

Externally *celeris* may be distinguished from *xanthopus* by the absence of the large white hip patch, the narrow and rather inconspicuous buffy-brown lateral streak, and the shorter haired tail with the absence of definitely ringed annulations.

Petrogale purpureicollis, sp. nov.

Fur short, and very soft. General colour above pale grey (about light drab), irregularly marbled with black or brown, interspersed with fleckings of a shade of buff; the colours tending to form short lines. Under surface a lighter buffy-grey. Hair on the back of the neck radiating laterally from the centre and washed with brownish vinaceous with grey tending to predominate on the nape, whereas the former colour predominates on the crown, fading into a lighter wash on the cheeks and throat. A dark brown mark commences before and extends over the eye to the ear-base. Nose, from tip to front of eye, darker than the rest of the head. There is a paler patch under the eye, which does not form a cheek stripe. Ears parti-coloured behind; upper forepart of outside dark mummy-brown; lower forepart and entire posterior half of outside of the ear lighter, brownish-buff. No lateral stripe is discernible, though, as usual, the sides are lighter. Edging the back of the shoulder and extending onto the side is a strongly defined irregular patch of blackish-brown; the outer edge of this patch is dark tawny-brown, which colour extends down the back of the arm. Front of arm,

cinnamon-buff, suffused with tawny-olive; paws, sayal brown, outer digits blackish-brown, which gives way to rich dark brown on the inner ones. A prominent blackish-brown streak commences a little below or on the knee, and extends over the knee and up the side almost half-way to the wither. The outside of the hip is lighter, but there is no distinct stripe. Front of legs tinged with huffy-grey. The foot is light ochraceous-buff near the ankle, pencilled with brown, which is darker along the centre of the foot, grading into blackish-brown on a level with the toes; the hairs are black on the longest toe. Tail short-haired to about the terminal fourth, upon which the hairs gradually lengthen, forming a slight tuft at the tip; general colour of proximal two-thirds tawny-olive, pencilled with grey, buff and brown, the terminal third gradually darkening from blackish-brown to black at the tip.

Skull.—Of the *assimilis-penicillata* type. Adult skulls of both sexes have a basal length of over 90 mm., associating the species with the larger varieties in section A. of Thomas' key. The interorbital region is more markedly concave than in *penicillata* or *lateralis*, though the depth is variable. The skull is proportionately shorter, broader, and more heavily built, and the diastema is considerably shorter, than in *penicillata*. Supraorbital edges sharp and flattened, inclining to be inflected upwards, the ridges converging to a varying degree behind. The sides of the muzzle are not inflated to the same degree as in *penicillata*, but are slightly and evenly convex, dropping more sharply downward from the edges of the nasals. Size of the teeth much as in *penicillata*; p^* broader anteriorly.

Dimensions of the type, flat skin:—Head and body, 670; tail, 510; ear, 50 mm. The hind-feet of two other specimens, male and female, each measure 150 mm.

Skull:—Basal length, 94.5; greatest breadth, 57.5; nasals:—length 44, greatest breadth 13, least breadth 7; constriction, 14; palate length, 61.5; breadth outside, m^2 29.3; diastema, 16.5; i^3 3.5; p^* 7.5 mm.

Hab.—Dajarra, North-west Queensland.

Type.—Aged male, in the Australian Museum collection, M.3405. Flat skins of two males and two females also examined. All the specimens have been donated to the Australian Museum.

Variation.—Five flat skins show the colour to be extremely variable in shade, but the markings described above are consistently present, though they may vary in density. All the skins are irregularly marked with shades of a rich tawny-brown, mostly between the shoulders and on the tail-root; one skin in particular, secured in the autumn, is heavily mottled with the tawny-brown, which is deepest at the tail-base. This mottling suggests that the colour undergoes a drastic change to the winter coat described above, and, if this supposition is correct, the summer pelage is probably of a much richer colour, with the tawny-brown predominating; doubtless the general colour would still be decidedly mottled. The cheek of one skin is washed with rich pinkish-cinnamon, while the other cheek is a light huffy-grey. The colouration of the tail is very variable in shade, though the basal half to two-thirds is consistently lighter than the remainder, and varies from tawny greyish-brown to clay colour, mixed with grey. In the females the final two and a half inches of the tail is lighter than in the male, dark-brown predominating, whereas in the males the dark colour covers the distal quarter of the tail and is blackish-brown.

Measurements of seven crania show the diastema to be consistently shorter than in adult *penicillata*; six specimens have the diastema measuring from 13.5 to 17.5, the seventh, an adult female, measuring 19 mm. These measurements serve to indicate the shorter and broader nature of the skull.

Comparison with allies.—Of the *P. penicillata-assimilis-rothschildi* group this

species is distinguished from the two former by having at least the basal half of the tail much lighter than the rest, instead of blackish-brown or black for the whole length. From *rothschildi* it is distinguished by its parti-coloured ears, and from *lateralis* by the absence of the white lateral streak and flank patch characteristic of the latter. *P. godmani* differs from *purpureicollis* in having the tail drabby whitish for its terminal third or half instead of grading from blackish-brown to black at the tip as in the latter species.

The specimen described above was taken early in June; one taken a month earlier was darker in general colour and heavily flecked with rich tawny-brown, indicating that the summer pelage is more rufous or tawny in tone. The purple colouration on the neck and face is very fugitive and soon fades; referring to this, Mr. Sinclair writes: "When I secured the specimen sent along, the pink round the neck was very marked, but after the skin was pegged out and dried it seemed to fade."

REVIEW.

A Synopsis of the Vertebrate Animals of Tasmania, by Clive E. Lord and H. H. Scott, Hobart, 1924. (21/-).

In a handy octavo volume of 340 pages the authors of this welcome addition to Australian zoological literature have compressed a wealth of information. The fishes, birds, reptiles and mammals of the Island State are faithfully listed, briefly but clearly described, in some cases figured, and in every case a reference given to the original author's description. The work does not claim to be more than a synopsis of the species, but it will serve admirably as a handbook for the use of beginners and students alike. The notes as to the frequency or rarity of occurrence of many species are of considerable value, and the authors have been careful to state the evidence in most instances where the records are of occasional or accidental visitors. In some cases, for instance, the Sooty Tern and the Fleishy-footed Petrel, one would appreciate a more definite reference. The fact that Alexander places the latter as breeding in the south-west region of the Australian coast line hardly qualifies the bird for inclusion in the Tasmanian list; and that the "Sooty Tern is more plentiful in the tropical seas than around the coasts of Tasmania, but . . . an occasional bird or so wanders south" is slender evidence upon which to base its inclusion in the Island fauna.

While commending the authors upon the concise but comprehensive nature of their text, it is not possible to compliment them upon the illustrations. Many of the plates from original photographs are lacking in clearness, and the text figures in outline are unnecessarily large, occupying space which could have been more usefully employed otherwise. Further, some of these outlines, notably that purporting to depict the head of the Crested Grebe, are more like cubist drawings than the objects they are intended to illustrate.

That the responsibility as regards cost of production was allowed to fall largely upon one of the authors is a reflection upon the liberality of the Tasmanian Government and the local scientific societies alike. Had some assistance been forthcoming from either or both of these sources, the work might have been published at a more popular price.